

Socio-economic Factors Affecting Maternal Health and Nutrition in Developing Countries: Special Focus on Bangladesh

Sharmina Ahmed

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Maternal Health and nutrition: Developed- vs. Developing countries

Variables/ issues	Developed countries	Developing countries
Fertility rate (/1000 live births)	1.6	3.4
Prenatal care (%)	97	65
Delivery care (%)	99	58
Maternal mortality (/1000 live births)	10	500
Maternal BMI (average)	52% overweight/obese	63% underweight
Age of first pregnancy	27 years	16.3 years
Diet during pregnancy	Ample	inadequate
Workloads during pregnancy (average)	heavy	heavy
Gender inequality (home and workplace)	+	+

Sources: WHO, 2013; L Mochhoury et al. ,2013; EA Ugwa et al., 2014

Maternal Malnutrition: A Life-Cycle Issue (1)

- **Infancy and early childhood (0-24 months)**
 - Suboptimal breastfeeding practices
 - Inadequate complementary foods
 - Infrequent feeding
 - Frequent infections
- **Childhood (2-9 years)**
 - Poor diets
 - Poor health care
 - Poor education

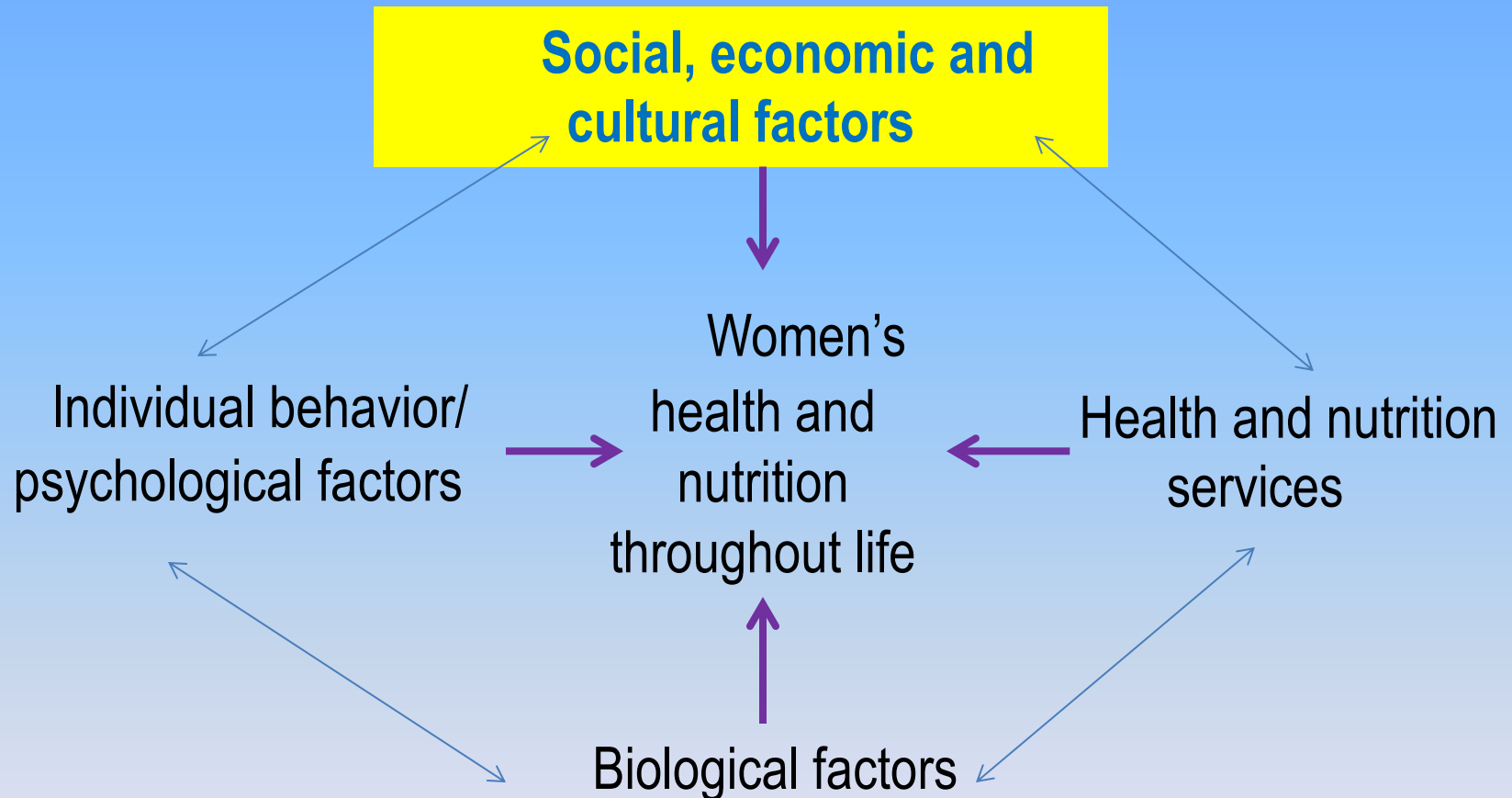
Maternal Malnutrition: A Life-Cycle Issue (2)

- **Adolescence (10-19 years)**
 - Increased nutritional demands
 - Greater iron needs
 - Early pregnancies
- **Pregnancy and lactation**
 - Higher nutritional requirements
 - Increased micronutrient needs
 - Closely-spaced reproductive cycles

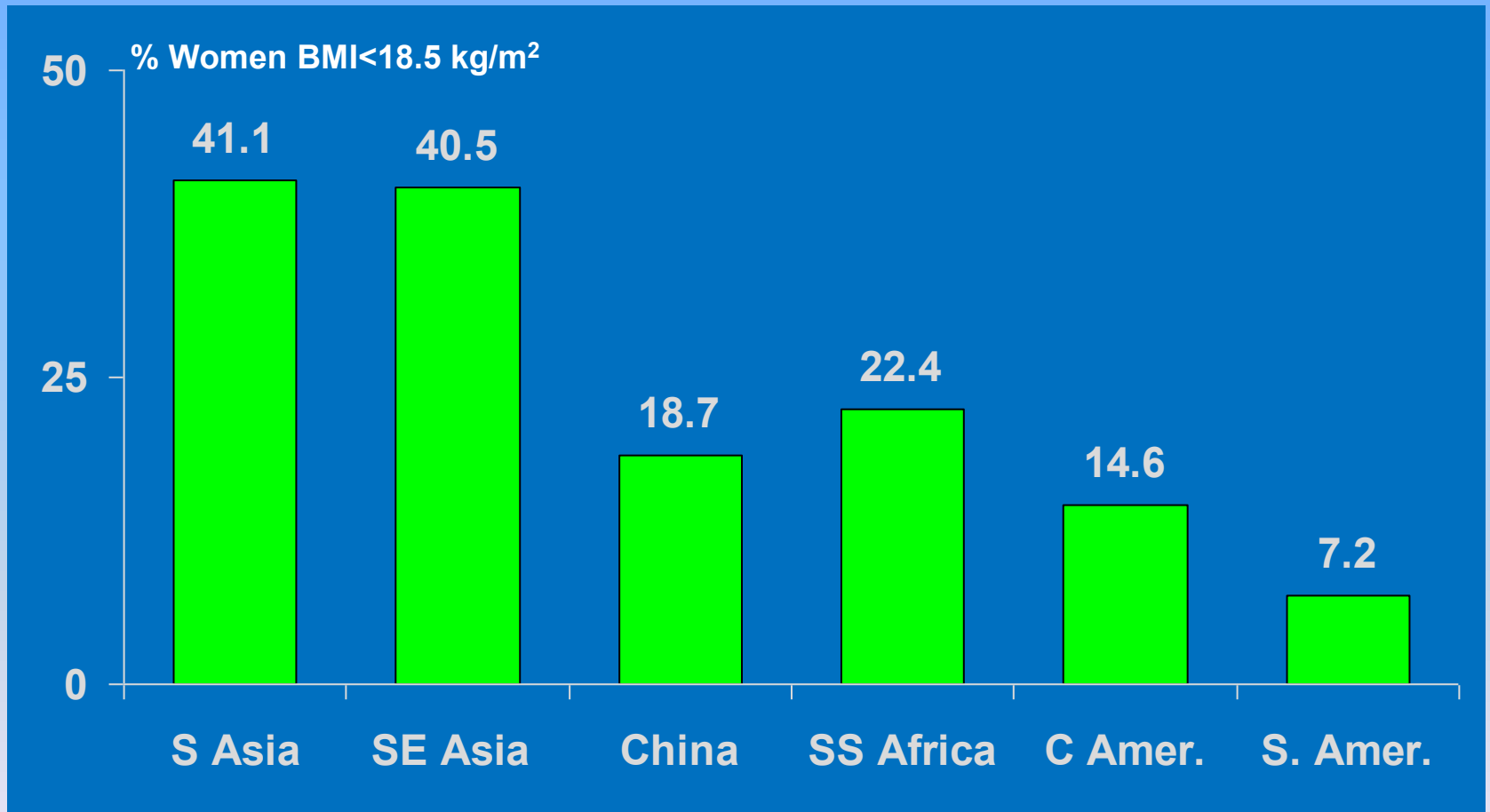
Maternal Malnutrition: A Life-Cycle Issue (3)

- **Throughout life**
 - Food insecurity
 - Inadequate diets
 - Recurrent infections
 - Frequent parasites
 - Poor health care
 - Heavy workloads
 - Gender inequities

Determinants of Maternal Health and Nutrition



Chronic Energy Deficiency in Women 15-49 Years Old



Why Invest in Maternal Nutrition in Bangladesh?

- The prevalence of malnutrition in Bangladesh is amongst the highest in the world.
 - Chronic energy deficiency in mothers- 32%
 - Low birth weight -36%
- Child malnutrition (0-59 months) :
 - Stunting- 40%
 - Underweight- 45%
 - Wasting -13%
- Malnutrition undermines human capital and economic productivity

Source: http://www.unicef.org/bangladesh/Child_and_Maternal_Nutrition.pdf

Food Security; Diet Diversity in Bangladesh

Food Security Indicators

Global Hunger Index (2013)	19.4 (serious level of hunger)
% of households with poor or limited food consumption (food insecure)	25
Proportion undernourished in total population (%) (2010–2012)	17
Food supply (kcal/capita/day) (2009)	2,481
Depth of food deficit (kcal/capita/day) (2011–2013)	111

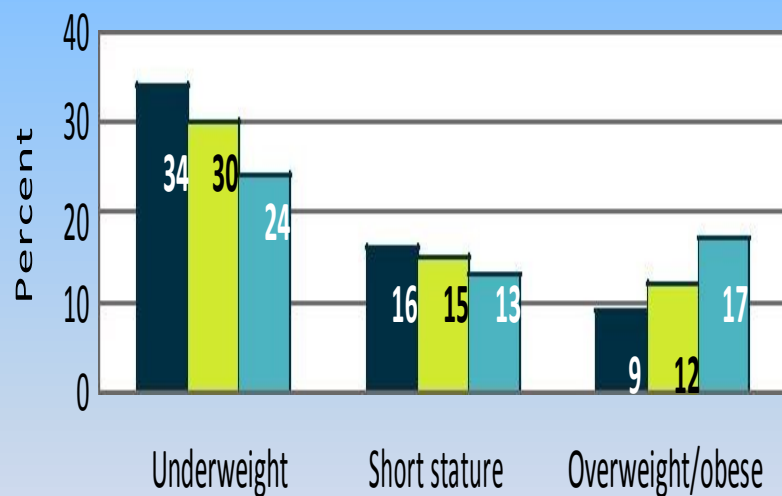
Diet Diversity Indicators

% of dietary energy supply from cereals, roots, and tubers (2009–2010)	80
Average supply of protein from an animal source (grams/capita/day) (2008–2010)	9

Sources: FAO 2013; von Grebmer et al. 2013 (for Global Hunger Index rating); WFP et al. 2009 (for % food insecure); FAO et al. 2012 (for undernourished); FAOSTAT (<http://faostat3.fao.org/faostat-gateway/go/to/browse/FB/FB/E>) (for food supply)

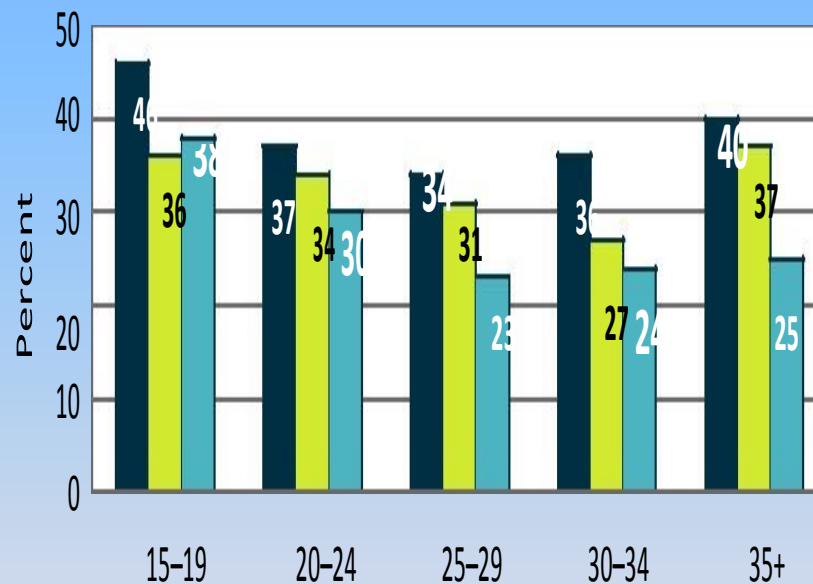
Maternal Nutrition in Bangladesh

Trends in Nutritional Status of Women (15–49 years), 2004–2011*



■ 2004 (DHS) ■ 2007 (DHS) ■ 2011 (DHS)

Trends in Maternal Underweight by Age, 2004–2011*



■ 2004 (DHS) ■ 2007 (DHS) ■ 2011 (DHS)

Sources: FAO 2013; von Grebmer et al. 2013 (for Global Hunger Index rating); WFP et al. 2009 (for % food insecure); FAO et al. 2012 (for undernourished); FAOSTAT (<http://faostat3.fao.org/faostat-gateway/go/to/browse/FB/FB/E>) (for food supply)

Social Determinants of Maternal Health and Nutrition in Bangladesh (from theory)

Broad factors	Identifiable factors	Quantifiable Variables
Poverty	access to primary health care	Access to primary health care facilities in village/Union
	Barriers to access to free child birth	Access to midwives, doctors in village/Union
	Lack of professionalization of midwifery	# of annual trainings/ workshops/ services arranged for midwives
Education	Proper educated women	# of times goes for antenatal care
		Income through employment
		Nutritional status
		Ability of identify danger signs of pregnancy

Social Determinants of Maternal Health and Nutrition in Bangladesh (contd.)

Broad factors	Identifiable factors	Outcome Variables
Gender Inequality	Neglect of reproductive rights	Access to contraceptive choice
		# of unwanted pregnancies
		# of times suffer from STI in life
	Violence against women	# of times faces physical violence during last pregnancy
		# of times faces sexual violence in life

Results from existing empirical studies on Bangladesh

Socio-economic determinants of maternal health and nutrition

Variable	Significance (+/-)
Maternal education -High school	+
Maternal knowledge -Maternal physical health -Maternal mental health - Food diversity	+ + +
Mother can earn money	-
Mother can decide to buy foods	+
Food security	+
Mother as household head	+
Number of children ,5 y	-
Father's occupation - Unskilled labour	-

Gaps and Missing Factors

- Social inequalities in utilization of antenatal care (ANC), facility based delivery (FBD), and skilled birth attendance (SBA)
- Father's/ partner's education
- Maternal Diet Diversity- Food groups/ micronutrients consumed
- Maternal self-perceived physical health
- Neglect of reproductive rights
- Violence against women

Problems with Current Programs to improve Maternal health and Nutrition in Bangladesh

- Maternal nutrition interventions are currently being delivered in a sporadic manner without sufficient research to support.
- Targeted programme covered only about 30% of the total population, and its efficacy has been questioned
- The programme did not cover any of the cities which have substantial slum populations.

Policy Implications of improving Maternal health and Nutrition in Bangladesh

- Should not be just about achieving the Millennium Development Goal
- Identifying determinants would help policy makers to focus on improved and effective behaviour change communication, improved micronutrient status through food intake and through micronutrient supplementation, better complementary feeding, etc.

Policy Implications of improving Maternal health and Nutrition in Bangladesh

- Legislative and other support for women's nutrition would help provide universal food fortification; provide consumer price subsidies and targeted food distribution
- Reduce discrimination against women in employment practices; encourage women's control over family resources
- Remove legal impediments to the effective delivery of health services for females (e.g., impediments to contraception and barriers to service based on age, sex, or marital status)



Thank you

sharmina.ahmed@adelaide.edu.au